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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PHAM, THOMAS K

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 10/23/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

PR4

Office Action Summary

Application No.

09/693,299

Applicant(s)

BILGER, BRENT

Examiner

Thomas K Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3. 6) ☐ Other:

Notice to Applicant(s)

1. Claims 1-36 of U.S. Application 09/693299 filed on 10/19/2000 are presented for examination.

DETAILED ACTION

Compact Disc Submission

2. The computer program listing filed on 10/19/2000 as a "microfiche appendix" is unacceptable. A computer program listing conforming to the requirements of 37 CFR 1.96 is required.

3. The description portion of this application contains a computer program listing consisting of more than three hundred (300) lines. In accordance with 37 CFR 1.96(c), a computer program listing printout of more than three hundred lines must be submitted as a computer program listing appendix on compact disc conforming to the standards set forth in 37 CFR 1.96(c)(2) and must be appropriately referenced in the specification (see 37 CFR 1.77(b)(4)). Accordingly, applicant is required to cancel the computer program listing appearing in the specification on page 1, file a computer program listing appendix on compact disc in compliance with 37 CFR 1.96(c) and insert an appropriate reference to the newly added computer program listing appendix on compact disc at the beginning of the specification.

Drawings

4. This application, filed under former 37 CFR 1.60, lacks formal drawings. The informal drawings filed in this application are acceptable for examination purposes. When the application is allowed, applicant will be required to submit new formal drawings. In unusual circumstances,

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the formal drawings from the abandoned parent application may be transferred by the grant of a petition under 37 CFR 1.182.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3, 16-20, 27, 29 and 35-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Humphries et al. U.S. Patent No. 5,621,662 (hereinafter Humphries).

Regarding claims 1 and 27

Humphries teaches

A home automation system for a home having a plurality of rooms separated by doorways, wherein each room has at least one of the doorways associated therewith, the system comprising:

- a plurality of controlled objects for placement in rooms (col. 13 line 66 to col. 14 line 14 “if a motion detector ... to notify the police”);
- a plurality of entry/exit sensors for placement at doorways to detect movement of a person therethrough (col. 13 lines 32-40, “A zone 52 is ... by a distinct zone 52.”);
- a plurality of room motion sensors for placement in the rooms to detect occupancy by a person therein (col. 13 lines 40-51, “a first security ... a pathway to the house 6”); and

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- a controller for controlling the controlled objects in response to both detected movement by the plurality of entry/exit sensors and detected occupancy by the plurality of room motion sensors (col. 4 lines 41-58, "a home automation system ... be on the network.").

Regarding claims 3 and 29

Humphries teaches

- at least one status sensor for determining a parameter of the home, wherein the controller further controls at least one of the controlled objects in response to the determined parameter of the home (col. 11 lines 15-26, "Since each hardware ... sensor is located.").

Regarding claims 16 and 35

Humphries teaches

- the home parameter includes at least one of a time of day, a level of ambient light, and a level of ambient temperature (col. 5 lines 36-43, "a temperature sensor ... the sensor is located.").

Regarding claims 17 and 36

Humphries teaches

- the home parameter includes at least one of a position of a door lock, a fingerprint detected from a person activating a home doorbell, a moisture content outside the home, a level of a pool of the home, a carbon monoxide level inside the home, a humidity level inside the home (col. 15 lines 10-16, "a user may set ... with the HVAC unit 79"), a water level in a basement of the home, and a temperature of water pipes underneath the home.

Regarding claim 18

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Humphries teaches

- a communications network connected between the controller, the plurality of entry/exit sensors, the plurality of room motion sensors, and the plurality of controlled objects (col. 5 lines 9-24, "a home automation system ... second user interface.").

Regarding claim 19

Humphries teaches

- the communications network includes wires that extend to each of the rooms in the home, and each of the plurality of entry/exit sensors, the plurality of room motion sensors, and the plurality of controlled objects has a unique address on the communications network for identification by the controller (col. 11 lines 15-26, "Since each hardware ... the sensor is located.").

Regarding claim 20

Humphries teaches

- the communications network includes at least one hub, the controller is connected to the at least one hub, and each of the plurality of entry/exit sensors, the plurality of room motion sensors, and the plurality of controlled objects are connected to the at least one hub (col. 6 lines 39-47, "The network comprises ... a temperature sensor.")

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 4-8, 12, 28 and 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humphries in view of Shimizu Japanese Patent no. 06230144.

Regarding claims 2 and 28

Humphries teaches the home automation system with a controller further controls at least one of the controlled objects in the one room in response to detected occupancy but does not teach the system with at least one spot sensor for placement in one of the rooms to detect occupancy by a person in a specific location within the one room. However, Shimizu teaches the system with at least one spot sensor for placement in one of the rooms to detect occupancy by a person in a specific location within the one room (fig. 1a, elements A and B). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the spot sensors of Shimizu with the home automation system of Humphries because it would provide for accurately detecting people entering and leaving the room without the interference of hall traffic.

Regarding claims 4 and 30

Humphries teaches the home automation system with a controller that the control of the controlled objects in the room varies depending upon distributes assignment to different sub-systems associated throughout a home network (col. 4 lines 42-48, "a home automation ... controller to a network.") but does not teach for each of the rooms: the controller assigns the room to a first room state in response to detected movement by one of the entry/exit sensors at the doorway associated with the room and to a second room state in response to detected occupancy by one of the room motion sensors placed in the room; and the control of the

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controlled objects in the room varies depending upon which of the first and second room states the room is in. However, Shimizu teaches for each of the rooms: the spot sensor 1 detected movement at the doorway associated with the room communicates the first room state to the logic circuit 10 and the spot sensor 2 placed in the room detected occupancy communicates the second room state to the logic circuit 10 (page 2-3 paragraphs 15-18). Examiner interprets that the logic circuit 10 is consider as a sub-system of the controller of Humphries. Therefore, it would have been obvious to combine the human-present detection system of Shimizu with the home automation system of Humphries because it would provide for accurately detecting people entering and leaving the room without the interference of hall traffic.

Regarding claims 5 and 31

Shimizu teaches at least one spot sensor for placement in one of the rooms to detect occupancy by a person in a specific location within the one room (fig. 1b, elements 1 and 2).

Regarding claims 6 and 32

Shimizu teaches the one room to the second room state in response to detected occupancy in the specific location by the spot sensor (page 3, paragraph 16).

Regarding claims 7 and 33

Humphries teaches the home automation system with a controller that the control of the controlled objects in the room varies depending upon distributes assignment to different sub-systems associated throughout a home network (col. 4 lines 42-48, "a home automation ... controller to a network.") but does not teach the controller assigns at least one of the controlled objects to a controlled object state in response to at least one of detected movement by one of the entry/exit sensors and detected occupancy by one of the room motion sensors; and the controller

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further controls the at least one controlled object in response to the assigned controlled object state. However, Shimizu teaches the system assigns to the alarm system an alarm state in response to at least one of detected movement by one of the entry/exit sensors and detected occupancy by one of the bath room motion sensors (page 3, paragraph 23); and the system further controls alarm to sound the alarm in response to the alarm state that a person is collapse in the bathroom (page 3, paragraph 24). Therefore, it would have been obvious to combine the human-present detection system of Shimizu with the home automation system of Humphries because it would provide for accurately detecting elderly people collapsing in the bathroom to alert a caretaker.

Regarding claims 8 and 34

Humphries teaches the home automation system further comprising: at least one status sensor for determining a parameter of the home (col. 11 lines 15-26, "Since each hardware ... sensor is located."), wherein the controller assigns least one of the controlled objects to a controlled object state in response to at least one of erected movement by one of the entry/exit sensors (col. 13 lines 32-40, "A zone 52 is ... by a distinct zone 52."); detected occupancy by one of the room motion sensors, and the determined home parameter by the status sensor (col. 13 lines 40-51, "a first security ... a pathway to the house 6"); and wherein the controller further controls the at least one controlled object in response to the assigned controlled object state independent of which of the first and second room states the room is in (col. 4 lines 41-58, "a home automation system ... be on the network.").

Regarding claim 12

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Humphries teaches the home automation system with a plurality of entry/exit sensors but does not teach the sensors includes at least one narrow range motion sensor for detecting movement of a person only in and adjacent to one of the doorways. However, Shimizu teaches the sensor includes at least one narrow range motion sensor for detecting movement of a person only in and adjacent to one of the doorways (fig. 1b, element 1). Therefore, it would have been obvious to combine the narrow range spot sensor of Shimizu with the home automation system of Humphries because it would provide for accurately detecting people entering and leaving the room with minimal interference of hall traffic.

9. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humphries in view of Duhamel U.S. Patent no. 5,285,136.

Regarding claim 9

Humphries teaches the home automation system with the plurality of entry/exit sensors but does not teach the sensors includes at least one light beam detector that comprises: a sending unit that directs a beam of light across one of the doorways, and a receiving unit that receives the light beam, wherein the detector is triggered when the light beam is interrupted by movement of a person through the one doorway. However, Duhamel teaches the sensor includes at least one light beam detector (abstract) that comprises: a sending unit (fig. 1, element 42) that directs a beam of light across one of the doorways, and a receiving unit (fig. 1, element 45) that receives the light beam, wherein the detector is triggered when the light beam is interrupted by movement of a person through the one doorway (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the light beam detector of Duhamel with the home automation system of Humphries because it would provide for

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detecting a person at the doorway for safety purposes as in the case of a garage door or for intruder detection of an alarm system within the home automation network.

Regarding claim 10

Duhamel teaches a reflective material disposed on a first side of the one doorway (col. 5 lines 39-41, "A reflector 44 disposed ... radiant beam"), wherein the sending unit and receiving unit are disposed on a second side of the one doorway such that the reflective material reflects the light beam from the sending unit back across the one doorway toward the receiving unit (col. 5 lines 37-42, "The radiant energy ... reaches receiver 45.").

Regarding claim 11

Duhamel teaches the sending unit is disposed at a height from a bottom of the one doorway which is different from a height from the bottom of the one doorway at which the receiving unit is disposed (fig. 1, elements 42, 44 and 45).

10. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humphries in view of Glidewell et al. U.S. Patent no. 5,319,698 (hereinafter Glidewell).

Regarding claim 13

Humphries teaches the home automation system with a plurality of entry/exit sensors but does not teach the sensors includes at least one magnetic contact switch for detecting movement of a door mounted in one of the doorways. However, Glidewell teaches at least one magnetic contact switch for detecting movement of a door mounted in one of the doorways (col. 3 lines 22-32, "Sensor means 16 ... magnetic switches."). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the magnetic switches of Glidewell with the home automation system of Humphries because it would provide for

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detecting a person at the door or window for safety purposes as in the case of intruder detection of an alarm system within the home automation network.

Regarding claim 14

Humphries teaches the home automation system with a plurality of entry/exit sensors but does not teach the sensors includes at least one pressure pad switch for detecting weight of a person walking through one of the doorways. However, Glidewell teaches at least one pressure mat switch for detecting weight of a person walking through one of the doorways (col. 4 lines 2-7, "The sensor means 16 ... motion detector, etc."). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the pressure mat switches of Glidewell with the home automation system of Humphries because it would provide for detecting a person at the door for safety purposes as in the case of intruder detection of an alarm system within the home automation network.

11. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Humphries in view of Shimizu and further in view of Duhamel and further in view of Glidewell.

Regarding claim 15

Humphries teaches the home automation system but does not teach the spot sensor includes at least one of a narrow range motion sensor for detecting occupancy in the specific location, a light beam detector having a sending unit to direct a beam of light across the specific location and a receiving unit to receive the light beam, and a pressure pad switch for detecting weight of a person walking through the specific location. However, Shimizu teaches the sensor includes at least one narrow range motion sensor for detecting movement of a person only in and adjacent to one of the doorways (fig. 1b, element 1). Furthermore, Duhamel teaches the sensor includes at

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least one light beam detector (abstract) that comprises: a sending unit (fig. 1, element 42) that directs a beam of light across the specific location and a receiving unit (fig. 1, element 45) to receive the light beam. Furthermore, Glidewell teaches at least one pressure mat switch for detecting weight of a person walking through the specific location (col. 4 lines 2-7, "The sensor means 16 ... motion detector, etc."). Therefore, it would have been obvious to combine the narrow range spot sensor of Shimizu with the home automation system of Humphries because it would provide for accurately detecting people entering and leaving the room with minimal interference of hall traffic. Furthermore, it would have been obvious to one of ordinary skill in the art to incorporate the light beam detector of Duhamel and the pressure mat switches of Glidewell with the home automation system of Humphries because it would provide for detecting a person at the doorway for safety purposes as in the case of a garage door and for intruder detection of an alarm system within the home automation network.

12. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humphries in view of Wang et al. "Towards Dependable Home Networking: An Experience Report" (hereinafter Wang).

Regarding claim 21

Humphries teaches the home automation system with a communication network connected to entry/exit sensors and motion sensors but does not teach the communications network includes a wireless transceiver connected to the controller, and each of the sensors, and the plurality of controlled objects includes a transceiver for communicating with the transceiver connected to the controller. However, Wang teaches the communications network includes a wireless transceiver connected to the controller, and each of the sensors, and the plurality of controlled objects

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includes a transceiver for communicating with the transceiver connected to the controller (fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the wireless transceivers of Wang with the home automation system of Humphries because it would provide for wirelessly transmit and receive communication between the sensors, the main controller and controlled objects for utilized the convenience and flexibility of the system.

Regarding claim 22

Humphries teaches the home automation system with a communication network connected to entry/exit sensors and motion sensors but does not teach the network includes: a power line transceiver connected between the controller and AC powerlines in the home; a plurality of powerline transceivers each of which connected between the home AC powerlines and one of the plurality sensors, and the plurality of controlled objects for communicating with the powerline transceiver connected to the controller. However, Wang teaches a power line transceiver connected between the controller and AC powerlines in the home; a plurality of powerline transceivers each of which connected between the home AC powerlines and one of the plurality of sensors, and the plurality of controlled objects for communicating with the powerline transceiver connected to the controller (page 4 col. 2 second paragraph, "Reliability is also ... persistent reliability problems"). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the wireless transceivers of Wang with the home automation system of Humphries because it would provide for wirelessly transmit and receive communication between the sensors, the main controller and controlled objects for utilized the convenience and flexibility of the system.

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Regarding claim 23

Humphries and Wang teaches the home automation system with a power outlet for connection to an AC power source but do not teach the power outlet includes: at least one multi-prong receptacle for receiving a power plug from an AC power driven device; and a communications port for sending and receiving signals over the communications network. However, it is obvious to one of ordinary skill in the art include a communication port for sending and receiving signals over the network in order for the sensors, controlled objects and main controller to exchange data either with wired or wirelessly connection.

13. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humphries in view of Wang and further in view of Mun U.S. Patent no. 5,579,221.

Regarding claim 24

Humphries and Wang teach the home automation system but do not teach at least one of an IR transmitter jack for connection to an IR transmitter that generates infrared signals in response to the signals received by the communications port, and an IR receiver jack for connection to an IR receiver that generates electrical signals for transmission by the communications port over the communications network in response to infrared signals received by the IR receiver. However, Mun teaches the wireless transmitter that generates signals in response to the signals received by the communications port and wireless receiver that generate electrical signals for transmission by the communications port over the communications network in response to transmitter signals (col. 5 lines 42-58, "When the circuit shown ... identification of the sensors."). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the wireless transmitter and receiver of Mun with the home automation system of

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Humphries because it would provide for wirelessly transmit and receive communication between the sensors, the main controller and controlled objects for utilized the convenience and flexibility of the system.

Regarding claim 25

Humphries and Wang teaches the home automation system with a connection to an AC power source but do not teach a power switch for turning AC power on and off to the receptacle in response to the signals received by the communications port. However, Mun teaches a power switch for turning AC power on and off to the receptacle in response to the signals received by the communications port (col. 11 lines 9-19, "power line controller PLC ... to the appliances"). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the system of Mun with the home automation system of Humphries because it would provide for turning on and off the AC power in response to the communication port signals in order to coordinate the control signal with the supply of AC power to the control objects.

14. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Humphries in view of Wang and further in view of Ehlers et al. U.S. Patent no. 5,572,438.

Regarding claim 26

Humphries and Wang teach the home automation system but do not teach an electrical current sensor for measuring an electrical current through the multi-prong receptacle, and for generating an output signal based upon the electrical current measurement for transmission by the communications port over the communications network. However, Ehlers et al. teaches an electrical current sensor for measuring an electrical current through the AC power receptacle,

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and for generating an output signal based upon the electrical current measurement for transmission by the communications port over the communications network (col. 19 lines 31-44, "The current sensor 80 ... into the module."). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the current sensor of Ehlers with the home automation system of Humphries because it would provide for sensing the electrical current of power line through the receptacle in order to prevent any overloading current apply to the controlled object.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (703) 305-7587 and fax number is (703) 746-8874, Monday-Thursday and every other Friday from 7:30AM- 5:00PM EST or contact Supervisor *Mr. Anil Khatri* at (703) 305-0282.

Any response to this office action should be mailed to: **Director of Patents and Trademarks Washington, D.C. 20231**, or **Hand-delivered** responses should be brought to **Crystal Park II, 2121 Crystal Drive Arlington, Virginia, (Receptionist located on the 4th floor)**, or fax to the **official fax number (703) 872- 9306**.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Thomas Pham
Patent Examiner

TP

October 14, 2003

Ramesh Patel
RAMESH PATEL
PRIMARY EXAMINER 10/14/03
For Anil Khatri